Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

CLAIMS

What is claimed is:

1. (Currently Amended) A method, comprising measuring packet round trip times within a communication network; organizing the packet round trip time measurements as an invariant distribution; applying an analytical tool to the invariant distribution to derive a plot exhibiting periodic peaks; and extracting information from the periodic peaks regarding congestion conditions within the network.

2 – 3. (Previously Canceled)

4. (Previously Amended) The method of claim 1 wherein the analytical tool is selected from the list comprising a Fourier transform and a wavelet transform.

5. (Previously Amended) The method of claim 1 wherein extraction of information regarding congestion conditions comprises determining period information from the periodic peaks.

6. (Previously Amended) The method of claim 1 wherein the extraction of information regarding congestion conditions further comprises determining bandwidth information from the periodic peaks.

7. (Original) The method of claim 6 further comprising using the bandwidth information to set a control bandwidth output of a network node.

8. (Original) The method of claim 7 wherein the control bandwidth output is set by adjusting inter-packet transmission times at the network node.

9. (Original) The method of claim 8 further comprising adjusting the control bandwidth output in response to changing network congestion conditions.

10. (Previously Amended) A method, comprising controlling inter-packet transmission times at a node of a communication network according to congestion conditions within the network, the congestion conditions being determining by measurement of packet round trip times within the network; organizing the packet round trip time measurements as an invariant distribution; applying an analytical tool to the invariant distribution to derive a plot exhibiting periodic peaks.

11. (Previously Amended) The method of claim 10 wherein the congestion conditions are determined by extracting bandwidth information regarding one or more congested links within the network from the periodic peaks.

12. (Original) The method of claim 11 further comprising identifying bandwidth bottlenecks from the bandwidth information.

13. (Currently Amended) The method of claim 12 wherein the inter-packet transmission times are controlled so as to provide a packet bandwidth approximately equal to a bandwidth of at least one of the bandwidth bottlenecks.

14. (Canceled)

15. (Currently Amended) The method of claim ~~14~~ 10 wherein the analytical tool is selected from the list comprising a Fourier transform and a wavelet transform.

16. (Previously Amended) A method comprising estimating congestion in a communication network from bandwidth bottleneck information obtained through a plot exhibiting periodic peaks, the plot derived from an invariant distribution of measurements of packet round trip times within the network applied with an analytical tool.

17. (Original) The method of claim 16 further comprising controlling packet transmissions from a node of the network according to the bandwidth bottleneck information.

18. (Canceled)

19. (Currently Amended) The method of claim ~~18~~ 16 wherein the analytical tool is selected from the list comprising a Fourier transform and a wavelet transform.

20. (Currently Amended) The method of claim ~~18~~ 16 further comprising controlling inter-packet transmission times at a node of the network according to the bandwidth bottleneck information.